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## GENERATING SYNTHETIC GROUP SELFIES

### TECHNICAL FIELD

The disclosure generally relates to digital photography.

## BACKGROUND

Selfies (e.g. a self-image) are a popular way to capture or memorialize an event or moment. For example, a selfie can be defined as an image that a user of an image capturing device (e.g., a camera) captures using the image capturing device where the subject of the image is the user. Typically, when taking or capturing a self-image, the user holds a computing device (e.g., smartphone, tablet computer, etc.) having a forward facing image sensor in close proximity to the user by holding the computing device at arm's length to capture an image of the user with the forward facing image sensor. In some cases, the user will use a device (e.g., a selfie stick) to extend the range of the user's arm so that the forward facing image capturing sensor can capture a wider image.

An individual selfie can, for example, be an image captured by a user of an image capturing device where the 25 subject captured in the image is the user. When a user wishes to memorialize an event with friends, the user can capture a group selfie where the self-image includes the user and the user's friends. While capturing an individual selfie can be accomplished easily since only the user needs to be placed within the field of view of the image capturing device, capturing a group selfie can be much more difficult since the user must arrange the user and the user's friends within the field of view of the image capture device when capturing the group selfie. Thus, an easier mechanism for capturing a 35 group selfie would be advantageous.

# SUMMARY

In some implementations, a computing device can gen- 40 erate a synthetic group selfie. For example, a synthetic group selfie can be an arrangement or composition of individual selfies obtained from a plurality of computing devices into a single group image (e.g., synthetic group selfie). The individual selfie images can be still images, stored video 45 images, or live streaming images. Thus, the synthetic group selfie can be a composition of still images, stored video images, or live streaming video images. The computing device can automatically arrange the individual selfies into the synthetic group selfie. The synthetic group selfie can be 50 stored as a multi-resource object that preserves the individual selfie images so that the user who created the synthetic group selfie or a recipient of the synthetic group selfie can modify the arrangement of the individual selfies within the synthetic group selfie.

Particular implementations provide at least the following advantages. Group selfies can be easily generated without having to organize or arrange people around a camera. The processing of individual selfies to remove background portions of individual selfie images can be distributed amongst 60 multiple devices to reduce the amount of processing required to be performed by an individual device. Individual selfies can be automatically and intelligently arranged within the synthetic group selfie so that the user is not required to arrange individual selfies within the synthetic group selfie. 65

Details of one or more implementations are set forth in the accompanying drawings and the description below. Other

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features, aspects, and potential advantages will be apparent from the description and drawings, and from the claims.

### DESCRIPTION OF DRAWINGS

FIG. 1 is a block diagram of an example system for generating synthetic group selfies.

FIG. 2 illustrates an example graphical user interface for initiating a synthetic group selfie.

FIG. 3A illustrates a graphical user interface for generating a synthetic group selfie.

FIG. 3B illustrates an example graphical user interface presenting an option to recapture an image.

FIG. 4 illustrates an example graphical user interface prompting a contributor user to participate in a synthetic group selfie.

FIG. 5 illustrates an example graphical user interface for capturing an individual selfie to be included in a synthetic group selfie.

FIG. 6 illustrates an example graphical user interface presenting an option to recapture an image.

FIG. 7 illustrates an example graphical user interface for presenting a preview of a synthetic group selfie.

FIG.  $\mathbf{8}$  is a diagram illustrating an example synthetic group selfie composition technique.

FIG. 9 illustrates an example graphical user interface for editing a synthetic group selfie.

FIG. 10 illustrates an example graphical user interface for storing a synthetic group selfie.

FIG. 11 is flow diagram of an example process for generating synthetic group selfies.

FIG. 12 is a flow diagram of an example process for participating in a synthetic group selfie at a contributor device.

FIG. 13 is a flow diagram of an example process for automatically arranging individual selfies into a synthetic group selfie.

FIG. 14 is a block diagram of an example computing device that can implement the features and processes of FIGS. 1-13.

Like reference symbols in the various drawings indicate like elements.

### DETAILED DESCRIPTION

FIG. 1 is a block diagram of an example system 100 for generating synthetic group selfies. For example, a synthetic group selfie can be an arrangement or composition of individual selfies obtained from a plurality of computing devices into a single group image (e.g., synthetic group selfie).

A selfie can be defined as an image that a user of an image capturing device (e.g., a camera) captures using the image capturing device where the subject of the image is the user. Typically, when taking or capturing a selfie, the user holds a computing device (e.g., smartphone, tablet computer, etc.) having a forward facing image sensor in close proximity to the user by holding the computing device at arm's length to capture an image of the user with the forward facing image sensor. In some cases, the user will use a device (e.g., a selfie stick) to extend the range of the user's arm so that the forward facing image capturing sensor can capture a wider image. The selfie is often of the user's face or a portion of the user's body (e.g., upper body) and any background visible behind the user.

A forward facing image sensor (e.g., camera) can correspond to an image sensor located on the same side of the